

AMENDMENTS TO THE CLAIMS

Kindly amend the claims, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, as follows:

1. (Currently Amended) A process for producing a boron coated abrasive, the process including the steps of contacting the abrasive to be coated with a boron source comprising boron powder combined with boric acid, at a coating temperature of about 800°C to about 1200°C in an inert atmosphere, for a time sufficient to coat at least a portion of the abrasive.
2. (Original) A process according to claim 1, wherein the abrasive is in the form of abrasive particles, larger abrasive bodies, or abrasive tools.
3. (Canceled)
4. (Canceled)
5. (Original) A process according to claim 4, wherein the ratio of boron powder to boric acid is 1:0 to 1:1 by weight.
6. (Original) A process according to claim 5, wherein the ratio of boron powder to boric acid is about 1:0.7 by weight.

7. (Previously Presented) A process according to claim 1, wherein the process is carried out at a temperature of about 800°C to about 1150°C.

8. (Original) A process according to claim 7, wherein the process is carried out at a temperature of about 1100°C to about 1150°C.

9. (Original) A process according to claim 8, wherein the process is carried out at a temperature of about 1150°C.

10. (Previously Presented) A process according to claim 1, wherein the process includes a preheating step, the preheating step comprising heating the abrasive and boron source incrementally to a temperature of about 250° to about 500°C, and maintaining them at that temperature for a period of about 15 minutes to about 45 minutes.

11. (Original) A process according to claim 10, wherein the preheating step comprises heating the abrasive and boron source incrementally to a temperature of about 300°C, and maintaining them at that temperature for a period of about 30 minutes.

12. (Previously Presented) A process according to claim 10, wherein the abrasive and boron source are incrementally heated to the coating temperature at about 5°C/minute to about 15°C/minute.

13. (Original) A process according to claim 12, wherein the abrasive and boron source are incrementally heated to the coating temperature at about 10°C/minute.

14. (Previously Presented) A process according to claim 1, wherein the abrasive and boron source are heated at the coating temperature for at least 30 minutes.

15. (Original) A process according to claim 14, wherein the abrasive and boron source are heated at the coating temperature for at least 3 hours.

16. (Original) A process according to claim 15, wherein the abrasive and boron source are heated at the coating temperature for at least 6 hours.

17. (Previously Presented) A process according to claim 1, wherein the ratio of abrasive to boron source is about 1:0.2 to about 1:20 by weight.

18. (Original) A process according to claim 17, wherein the ration of abrasive to boron source is about 1:2 by weight.

19. (Previously Presented) A process according to claim 1, wherein the abrasive is diamond or cubic boron nitride.